

3. (withdrawn)

4. (previously amended) The method of claim 2 where the ~~source of~~ hydrogen flowing through the conduit includes at least a stoichiometric amount of oxygen (O₂) to sustain combustion of the hydrogen (H₂) ~~comprises a predetermined mixture of hydrogen and oxygen.~~

5. (withdrawn)

6. (previously amended) The method of claim 2 wherein a speed of the rotating hydrogen flame in a circumferential direction is not less than the forward flame velocity of the ignited hydrogen.

7. (previously amended) The method of claim 1 wherein said step of dispersing said liquid primary fuel further comprises flowing a pressurized source of liquid primary fuel through a conduit of a rotating shaft and including a discharge end having an atomizing nozzle to discharge the liquid primary fuel into the zone of combustion.

8. (canceled)

9. (previously amended) The method of claim 1 where said primary fuel is selected from the group comprising processed and unprocessed vegetable oils, by-product oils from agricultural products processing, liquid and liquefied petroleum fuels, and liquid and liquefied animal fats.

10. (currently amended) The method of claim 2 where the step of providing pressurized hydrogen (H₂) from the hydrogen source further includes the steps of:

generating a constant rate of hydrogen (H₂) and oxygen (O₂) gases from the electrolysis of water, and

transferring the hydrogen (H₂) and oxygen (O₂) gases into a fixed-volume staging chamber such that the hydrogen and oxygen gases are continuously exposed to an inlet opening of the conduit.

11. (currently amended) The method of claim 1 further including a step of injecting a controlled rate of an additive selected from steam or water into the first zone of combustion, ~~to control the formation of oxides of nitrogen.~~

12. (previously amended) The method of claim 11 wherein the injection of said additive is accomplished by pre-mixing the water at a controlled rate with the liquid primary fuel.

13. (withdrawn)

14. (withdrawn)

15. (withdrawn)

16. (withdrawn)

17. (withdrawn)

18. (withdrawn)

19. (withdrawn)

20. (withdrawn)

21. (withdrawn)

22. (withdrawn)

23. (withdrawn)

24. (currently amended) The method of claim 2 further comprising the steps of providing a second conduit for delivering hydrogen through a second discharge opening adjacent to the first zone of combustion, igniting the hydrogen discharging through said second discharge opening to produce a second hydrogen flame, and rotating said second hydrogen flame about the longitudinal axis.

25. (previously amended) The method of claim 24 further comprising the steps of providing a plurality of additional conduits for delivering hydrogen through additional discharge openings with said additional discharge openings extending radially outward from the longitudinal axis relative to the first two hydrogen discharge openings, igniting the hydrogen discharging through said additional conduits to produce a plurality of hydrogen flames, and rotating said plurality of hydrogen flames about the longitudinal axis in the same rotational direction as said first and second discharge openings.

26. The method of claim 25 where the plurality of additional conduits for delivering hydrogen are rotated in a direction opposite to the first and second conduits along the longitudinal axis.